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## PLOVER LAND AND BORDEN LAND

By VILHJALMUR STEFANSSON

In the Arctic, real lands have surpassing skill in hiding themselves, while lands that never existed appear clear and indubitable to the eyes of the keenest and most experienced explorers.

In 1826 Sir John Richardson, then on his first Arctic voyage, sailed close by Clerk Island in Dolphin and Union Straits. On his second voyage in 1848 he tells us that because of unfavorable conditions he passed Clerk Island without seeing it. No one has seen it since. In 1911 I traveled by sled over the site of it. Down to that time Clerk Island appeared on the Canadian Government maps, but it will not appear in future.

Several other Arctic lands, after being reported by men of authority, have kept their places on the chart for one or several generations but are now gone forever. Others have been rendered doubtful or have at least been compelled to retreat before the advance of knowledge. In this class are Sannikov Land, the existence of which has been rendered doubtful by the voyage of the *Taimyr* and the *Vaigatch*, and Crocker Land reported by Peary.

It seems to me that Crocker Land should still be granted a period of grace. MacMillan marched into the edge of it (as plotted by Peary) and found only sea ice. Had he taken soundings and found abysmal depths, the case against land being there would be impregnable. But he took no critical soundings, and the soundings taken on our journey aimed towards the same general locality in 1917 grew no deeper as we went away from the known lands but continued to be of a "continental shelf" character for 150 miles as we traveled towards Crocker Land. I suggest that we let Crocker Land bide till the vicinity is sounded and shown to be deep water, or till the region is explored so thoroughly that we know it is not merely hiding.

For some Arctic lands, as has been remarked, have shown striking aptitude in hiding. The strait between Cape Chelyuskin and Nicholas II Land is but 60 miles wide and the land to the north is high, even mountainous, and yet that passage was traversed by Nordenskiöld in 1878 and Nansen in 1893 without either of them suspecting that it was a strait. The discovery remained for Vilkitsky in 1913.

It is only about 60 miles north from Cape Parry to Nelson Head on Banks Island, and Nelson Head is a bold cape with high hills or low mountains just behind it—3,000 or 4,000 feet high. I have at various times spent altogether several months at Cape Parry, and nearly every day I climbed the highest hills there (300 or 400 feet) with field glasses to look northward for bears and seals and incidentally for land. And yet, only two or three times have

I seen Nelson Head, but each of those times I saw it clearly, well above the sky line.

In 1853 Leopold McClintock, to me the most capable and admirable of the entire noble line of British naval men who laid the American Arctic bare to our eyes, was at what we now call Cape McClintock at the northern end of Prince Patrick Island and did not see the large land which we discovered sixty-two years afterwards lying only 30 or 40 miles to the northeast. Nay more, he says in the record which we found in his cairn at Cape McClintock that he had visited "the islands and reefs lying to the northward." I have since examined his manuscript map, sketched into his diary at the time, and this shows that he had seen some small sand bars that are 15 or 20 miles north-northeast of Cape McClintock, or only that much distant from our New Land. I have also stood at Cape McClintock looking northeast without seeing anything but what he saw. I then went to the "islands and reefs" which he visited and even to those beyond, which he saw only from a distance, still without seeing land beyond. And the day was apparently clear. But later, on days of more favorable weather conditions, I have climbed up the hills on our New Land and seen Prince Patrick Island and all the intervening islands and sand bars.

Having justified by a few examples our thesis that nonexistent lands reveal themselves while real ones lie in hiding, we come to the interesting case of Plover Land.

#### KELLETT'S PLOVER LAND

Captain Kellett, who was McClintock's superior officer in 1853 (when McClintock discovered Prince Patrick Island and left there the record quoted above), had three years earlier been in command of the *Herald* on her Beaufort Sea voyage when she discovered Herald Island. After telling about discovering and landing on Herald Island Kellett reports that in about latitude  $72^{\circ}$  N., longitude  $175^{\circ}$  W., there is an extensive land upon which he did not set foot. In his account the following is perhaps the most striking passage:

There was a fine clear atmosphere (such a one as can only be seen in this climate), except in the direction of this extended land, where the clouds rose in numerous extended masses, occasionally leaving the very lofty peaks uncapped, where could be distinctly seen columns, pillars, and very broken peaks, characteristic of the higher headlands in this sea—East Cape and Cape Lisburne, for example. As far as man can be certain who has 130 pairs of eyes to assist him, and all agreeing, I am certain we have discovered an extensive land.<sup>1</sup>

#### OTHER VOYAGES IN THE VICINITY OF PLOVER LAND

Plover Land (named for the companion ship to the *Herald*) was put on the charts. But later Commander Rodgers in the U. S. S. *Vincennes* ran through the position as indicated on the Admiralty chart and anchored in 42 fathoms in latitude  $72^{\circ} 5' N.$ , longitude  $174^{\circ} 37' W.$ , where Plover Land

<sup>1</sup> Papers and Correspondence Relative to the Arctic Expedition under Sir John Franklin, Parliamentary Papers, 1850.

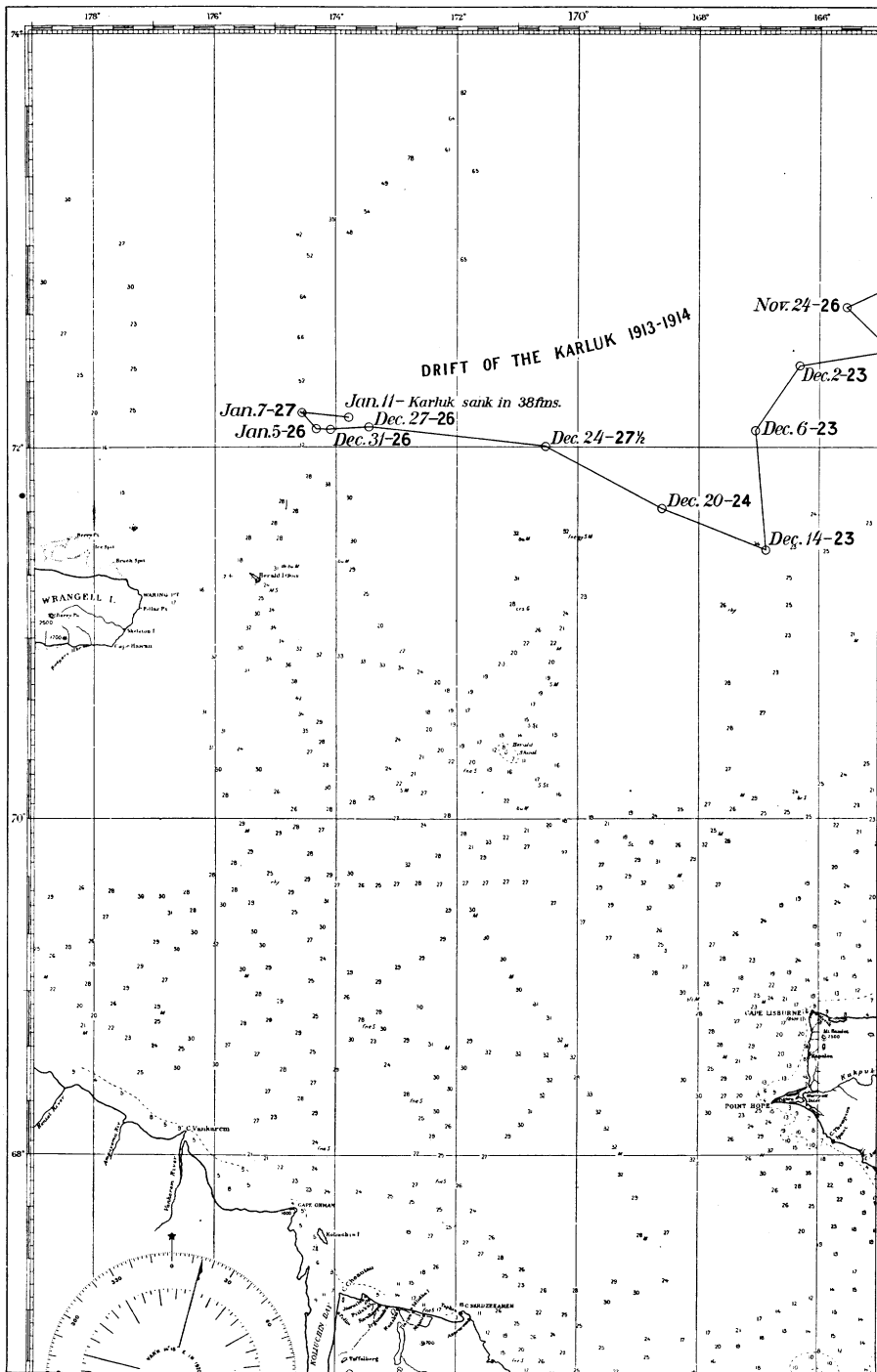


FIG. 1.—Reproduction on a reduced scale of a portion of the U. S. Coast and Geodetic Survey chart 9400 (Arctic Coast of Alaska), 1914, to show the charted position of Herald Island in relation to Wrangell Island (Waring Point) and soundings in the adjacent waters. The soundings charted north of the islands define Lieut. Berry's course in the U. S. S. *Rodgers*, 1881 (compare the chart, p. 143, reproduced to accompany G. W. Littlehales: The Navy as a Motor in Geographical and Commercial Progress, *Bull. Amer. Geogr. Soc.*, Vol. 31, 1899, pp. 123-149 and note the map on p. 148, showing the drift of the *Jeannette*). On the chart has been plotted the last stage of the drift of the *Karluk* dates being given and soundings in fathoms.

should have been, and reported that for thirty miles in every direction there was no land though the weather was so clear that the horizon was apparently without limit.<sup>2</sup> A little doubt, however, is cast on this testimony by the fact that on the same voyage Commander Rodgers failed to see Wrangell Island although, according to his reported astronomical observations and our present knowledge, he was only a few miles from it. After all, the position assigned to Plover Land by Kellett was only approximate; there may also conceivably have been an error of position in Rodgers's reckoning.

Later the ship *Rodgers*, commanded by Lieutenant Berry,<sup>3</sup> reported reaching latitude 73° 44' N. in longitude 171° 48' W. without seeing land. If we consult the standard charts we find the whole vicinity of Plover Land sounded. But the figures show shallow water, as if the facts were determined so to balance themselves as still to leave a possibility of land. We may also remember that, if it be supposed that Kellett was nearer to the land than he thought, he may have overestimated its extent.

We now come to the reason for the writing of this paper. Plover Land has again been seen.

#### PLOVER LAND AND BORDEN LAND

In the spring of 1914, after the wreck of the *Karluk* a short distance to the northeastward, several members of our expedition remained encamped at Waring Point, Wrangell Island, for several months. During that time a land other than Herald Island was seen one day to the eastward and was repeatedly seen thereafter. The two most important witnesses are John Hadley and William McKinlay.

#### THE TESTIMONY OF HADLEY

John Hadley, a native of Canterbury, England, had spent most of his life in the Arctic since he went thither in 1889 as petty officer on the U. S. Revenue Cutter *Thetis* sent to determine whether the station of the American whaling fleet at Herschel Island was in Alaska or Canada. Some of the time he had been aboard whaling ships,<sup>4</sup> but for the most part he had been engaged in whaling from a shore station either at Point Hope or Point Barrow. I met him in 1908, and from my first meeting my liking and admiration for him increased continually. He was one of the most valuable members of our expedition of 1913 to 1918. For fifteen months in 1913-1914 he was with the *Karluk* section of that expedition. I re-engaged him in 1915, making him second officer of the C. G. S. *Polar Bear*, of which he later became captain.

In point of years Hadley's Arctic experience has never been equaled by any explorer, so far as I know. He had, for instance, spent there more than twice as many winters as Peary, even before he joined our expedition.

<sup>2</sup> Rept. of the Secretary of the Navy, Dec. 3, 1881, Reconnaissance of Behring's Straits, pp. 7-9.

<sup>3</sup> Rept. of the Secretary of the Navy, Nov. 28, 1881, pp. 6-9, 755-763.

<sup>4</sup> See "Whaling off the Alaskan Coast: From the Journal of Jack Hadley of Point Barrow, Alaska," *Bull. Amer. Geogr. Soc.*, Vol. 47, 1915, pp. 905-921.

These were not inactive years ashore, for every spring he was out with companions both white and Eskimo fighting the ice and weather in the strenuous sport of catching that biggest of all game animals, the bowhead whale. Colonel Roosevelt once planned to hunt bowhead whales on the northern coast of Alaska. He might have found it braver sport than hunting lions in Africa: he certainly would have found it more healthful than the South American jungle. Hadley had found it healthful. His eye was still keen, and so was his enjoyment of life; his judgment was sound by nature. These considerations lend weight to his story of what he called "Borden Land."

It was from higher ground in the vicinity of Waring Point that Hadley first noticed a new land beyond Herald Island. The northern tip of this land was hidden by Herald Island, and it extended about 25° south. His first thought on seeing it was the strangeness of not having seen it before, especially on the march ashore after the wreck of the *Karluk*. When he made a statement to that effect to the Eskimo Kurraluk, the Eskimo replied that he had seen the land both from the ice after the *Karluk* was wrecked and while the party were still encamped there and also while they were on their way to Wrangell Island. Hadley inquired from the other men whether they had seen the land, but none of them had noticed it. He did not consider this strange, for he assumed that it would have been covered with snow at the time and perhaps only indistinctly visible, being but a white outline on a white horizon. Had it been distinct, he himself certainly would have noticed it.

After the land had first been seen it was visible whenever weather conditions were suitable. It is a matter of common knowledge that the absence of fog in one's immediate vicinity is no guarantee that there is not a thick fog bank lying invisible a few miles away and hiding everything beyond. Accordingly it did not strike Hadley as remarkable that on many apparently clear days the land could not be seen.

After the land had been seen three or four times and there was general agreement as to its reality, it was decided to name it "Borden Land" in honor of Sir Robert Borden, who had been chiefly instrumental in securing the transfer of our expedition from American auspices to those of the Canadian government.

Hadley considered the most important fact about the land to be this, that when it was first seen it was to a large extent covered with snow and that day by day the snow could be seen to be getting less and less, so that when the land was last seen the snow was mainly confined to what appeared to be gullies or the slopes of hills. He said he had no doubt at all of the existence of the land; the fact that it was not seen from the decks of either the *King and Wing* or the United States Revenue Cutter *Bear* when they were cruising in the vicinity of Herald Island looking for the missing members of the expedition, he considered to be of no significance. A fog to the northeast would, in his opinion, have explained its non-appearance.

This, in substance, is what Hadley told me. As he has since died, I will fortify myself by quoting Archdeacon Hudson Stuck's account of his interview with Hadley on this subject. The time of the Archdeacon's visit to our camp was late March, 1918. I quote from his most interestingly written book, "A Winter Circuit of Our Arctic Coast":

Ten miles more brought us to Barter Island and to the extensive building, half underground in sensible vernacular fashion, of Mr. Stefansson's base camp, and here we were hospitably received by Captain Hadley, who was in charge. . . . He had been on the *Karluk* when she was lost, full of scientists and all sorts of expensive and elaborate equipment, and bore no small part in bringing the survivors to Wrangell Island, there lying many months until rescued by the *King and Wing*. Having just read the "Last Voyage of the *Karluk*" it was illuminating in many ways to hear Captain Hadley's account.

But what interested me most keenly was his statement that while on Wrangell Island, again and again, on clear days, he had seen land with mountain tops far to the north-east. . . .

I plied Hadley with questions: There could be no possibility that it was cloud banks he saw or mirage? How could it be when it lay always in the same place and bore always the same shape? Could he make any estimate of the distance? It was very far off, perhaps an hundred miles, perhaps more; it was impossible to say, but it had bold rugged mountain peaks covered with snow in places and in places bare. I reminded him of the *Jeannette* drift, of the *Vincennes* voyage, of Berry in the *Rodgers*. Yes, he knew of the two former though he seemed to think there was some doubt about the last, but it did not matter how many said there was no land there, he had seen it again and again, and had no more doubt about it than about the island we were on now. How many times altogether could he say that he had distinctly seen it? Well, he had made no count; every thoroughly clear day; and he said that though clear days were rare, when they were clear they were wonderfully clear. Had he seen the land twentytimes? Yes, fully twenty and probably more.

So there it stands: Rodgers did not see Wrangell Land for fog, though but a few miles off his course; there may have been other land he did not see; the *Jeannette* drifted steadily northwest away from Herald Island and in this land is reported northeast. And Hadley's testimony agrees remarkably with Kellett's description.<sup>5</sup>

#### THE TESTIMONY OF MCKINLAY

William Laird McKinlay is a Scotchman, a graduate of Glasgow University where he specialized in mathematics and physics. On our expedition he was in charge of the investigations in terrestrial magnetism. Apart from his lack of Arctic experience he was by training about as well equipped as anyone could be to report on the phenomena here in question.

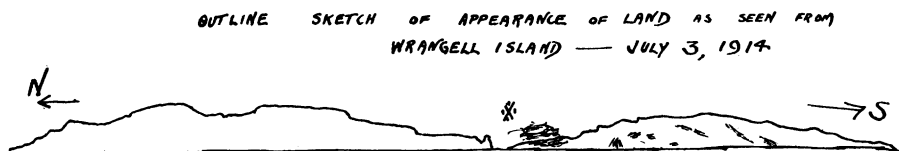
Before deciding to publish Hadley's account I wanted McKinlay's story. I quote his letter verbatim, so far as it related to Borden Land. The sketch map is exactly as he drew it.

With reference to what Mr. Hadley may have told you regarding appearance of land, I do not suppose that I can add much, but I can certainly confirm that evidence. The appearance of land was seen only on days when conditions were fine and clear. It bore roughly east to east-northeast from our position in the small bay at Waring Point in which our camp was situated, its northern end being in line with the southern end of Herald Island, and it was visible to the south for a distance roughly four times the length of Herald Island, as the latter presented itself to us in our position at that time. I have not sufficient

<sup>5</sup> Hudson Stuck: *A Winter Circuit of Our Arctic Coast*, New York, 1920, pp. 304-305. (Reviewed in this number of the *Geographical Review*.)

experience of the effects of mirage in polar regions to be able to say whether such appearances may have been due to such a cause; but probably the fact—and this was to me the one really noteworthy fact—that, making allowance for the slight variations in conditions of visibility on clear days, the outline was on all occasions practically identical, rules the consideration of mirage out of the question, and renders the actual existence of land more probable.

Beyond the outline it was hardly possible for us to note much detail, beyond the fact that the side presented to us seemed to consist for the greater part of its length of cliffs or steep slopes. On one occasion there appeared to be a decided gap, separating the land into two distinct parts; but, whether due to defects in visibility near the surface or not, this was not generally noticeable. It was impossible for us to make even a rough estimate of the distance



Note (under date July 3)

\* The small cloud of mist resembled that due to open water. The shaded portions on the southern half indicate the presence of what looked like the unmelted snow remaining in gullies; the northern half showed no such signs.

*W. Lusk*

FIG. 2

of the supposed land; but the height at the highest point appeared slightly less than that of Herald Island, although, of course, the fact that it was much farther distant than Herald would mean that this lower altitude was apparent rather than real.

Perhaps I cannot do better than give you an extract of a few brief notes bearing on this, under dates when the land was seen, together with a rough sketch of the outline and weather notes for each day.

*Wednesday, June 17, 1914*

Appearance of land in direction of Herald Island, bearing roughly ENE. Apparently much farther off (than Herald Island).

Weather—calm; light airs. Completely overcast in early morning; clear all day thereafter.

*Friday, June 19*

The island again shows up clearly with unchanged appearance. If land, it is something new and uncharted.

Weather—wind south, light to strong breeze. Cloud—few stray cirrus.

*Saturday, June 20*

Our island again showed up clear and unchanged. Hadley and I have decided to name it Borden Land.

Weather—wind south, variable from light to strong. Cloud—few Ci.



*Sunday, June 21*

Hadley reports having seen our island again when he went out this morning, but indistinctly.

Weather—wind east, light to moderate breeze. Cloud, Ci.<sub>2</sub> fog, not dense, from 3 till 7 P.M.

*Friday, June 26*

Our island was again clearly visible, with what appeared to be a gap cutting it in two. The constancy of outline almost convinces us that it is actually land, but it is hard to believe that the Karluk drifted through that region without it being sighted.

Weather—wind light and variable. Clear all day; Ci.Cu.<sub>2</sub> in evening.

(Fog and conditions of bad visibility intervened until July 3.)

*Friday, July 3*

Our island has been remarkably clear today; unchanged outline.

Made a rough sketch of this outline.

Weather—wind at first SE light, but later variable. Clear in forenoon; completely overcast later.

From that date until the *King and Wing* arrived, on September 7, conditions were uniformly bad, indeed, only four days appear in the total of 65 which could be described as clear—August 1 to 4—and probably the fact that we were constantly on the ice or in its neighborhood in search of game accounts for no mention of our seeing a recurrence of the appearances noted above. In that period of 65 days 22 were foggy or misty, rain fell on 8, and snow on 12; while 17, on which none of these phenomena was noted, were “completely overcast.”

From a study of the track of the Karluk's drift you will see that from the first week in December the ship was never very far north of the line in which the supposed land appeared to be; and no point on that line is any farther south of the ship's track after December 13 than where land was sighted on December 29, bearing S by W (Herald Island). Moreover from December 14 to December 29 every day with two exceptions was clear either all day or part of the day; but I have no knowledge of any appearance of land having been noted by any member of the ship's company during that period. This fact, together with the knowledge that the charts show that region to be more or less sounded, made me very much inclined to doubt the probability of the existence of land in that direction; but so far as the testimony of our vision can go, I can assure you that I can strongly corroborate Mr. Hadley's statements that we did see appearances of land. Indeed, it was, as I have already remarked, the noteworthy fact that the outline was on every occasion practically the same that most impressed me and finally led me to make the rough sketch I enclose.

The following notes on McKinlay's account are pertinent:

1. He refers to the southern end of Herald Island as being northeast from Waring Point, while by the American and British charts it is east or but a few degrees north of east. It is more likely that the charts are wrong either as to the position of Herald Island or as to that of Waring Point than that McKinlay erred so much in giving the direction of the one from the other.

2. That there should be a gap seen in the land on one occasion does not affect the evidence as to the presence of land. I have frequently seen such gaps in lands well known to exist—the cause being either a mirage or a fog bank lying on the land. It is for this reason that some large bays laid down on polar charts are found to exist only on the charts—a gap appearance caused by fog or mirage has been taken for a bay.

3. The hardest blow against Borden Land is struck by McKinlay's statement that from December 14 to December 29 every day with two exceptions was clear and that no land was seen, so far as he knows. According to the chart, the *Karluk* should during this time have been in a northerly direction from Borden Land, and it is well known to all Arctic travelers that conditions for seeing land to the south can never be more favorable than exactly at this time of year when any land, no matter how snow-covered, would be seen as a clear silhouette against the southern dawn.

But this statement is offset by the one by Hadley that the Eskimo Kurraluk did see the land to the south during the period in question. Hadley believed it might have been seen by the Eskimo even though it had escaped his own notice. And, because of his experience and habits of close observation, Hadley was certainly more likely to notice it than anyone else, with the possible exception of the Eskimo.

Thus the facts try continually to counterbalance each other, alternately introducing doubt into our certainties and canceling our doubts. It seems reasonable, however, that if the Borden Land of Hadley and McKinlay and the Plover Land of Kellett are existent they are one and the same. But if the various accounts are to be reconciled, it will be necessary to shift the charted positions of either Point Waring or Herald Island, or both. That may not prove so difficult as it seems, for the observations of our expedition have already shifted the positions of several such well-known landmarks as Cape Parry and Cape Bathurst as much as twenty miles. In the far north faith in the sextant and chronometer occasionally moves mountains.